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## **DISCUSSION PAPER**

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**Russian «Artel'nost'» — Myth or Reality?  
Artel' as an Organizational Form in the XIX  
— Early XX Century Russian Economy:  
Comparative and Historical Institutional  
Analysis**

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Many Russian economists, sociologists, and public leaders have asserted that one of the fundamental mental models of Russian people demonstrated over the long history is the so called “artel'nost” i.e. the internal commitment to collective work, aspiration to work in solidary groups. However comparative and historical institutional analysis reveals that the assertion of Russian people’s artel'nost has no supported evidence. Artel as an organizational form of production was not the result of the specific Russian national character and mentality. Different types of artel-like associations had existed in different countries including Western European. Existence of the collective forms of labor in Russia was mainly connected either with the non-economic coercion and propagation or with the higher economic effectiveness of such organizational forms in the specific spheres of activity. In particular artel’s «natural habitat» was quite narrow and was confined within activities of low capital investment, simple homogeneous job and labor with primitive equipment and technology. Artel in its «pure» forms did not survive in other spheres. Principal-agent and team production approaches highlight that Russian artel was an effective institution for solving adverse selection and moral hazard problems.

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## Introduction

Collectivism is often highlighted by scientists as one of the features of the Russian national character and mentality. They regard it as an informal, embedded institution of the Russian society which should be taken into consideration during socio-economic transformations. In this connection, it is very important and pressing to find out to what extent collectivism determined, and still determines, the economic behavior of the Russian person. It is of great importance both at the macroeconomic level for developing an appropriate state-run socio-economic strategy and at the microeconomic level for improving management styles used to run Russian companies, for working out adequate forms of labor organization and workers' motivation by Russian managers.

Russian scientists consider *artelnost*, i.e. a specific propensity for working collectively in the economic sphere, as one of the most significant manifestations of collectivism.

The aim of this paper is to find out whether *artelnost* is in fact a basic institution of the Russian society. This issue has been ignored by Russian researchers over the last decades remaining simply rhetorical. The paper focuses on checking the following hypothesis: the Russian person did not have a specific inherent motivating commitment to collective work. The existence of *artels* in Russia was, to a large extent, due to a higher economic effectiveness of this organizational form of economic activity in some spheres.

The object of investigation is *artel* as an institutional form of economic activity in Russia in XIX — early XX centuries. Factors which helped *artels* come into being and remain relatively stable and common in the historic past, as well as the role of mental models in these processes are the subject of this investigation. This study is based on empirical descriptions of *artels* of the second half of XIX century, *artels'* charters, statutes relating to *artels* and a wide range of historical literature. In this study principles of historical and comparative institutional analysis are used. The main method is that of analytic narratives. New Institutional Economics is used as an analytical tool; in particular, such parts of it as Economics of Institutions and Institutional Change, Historical and Comparative Institutional Analysis, Contract Theory, Alchian–Demsetz' team production concept, Jensen–Merckling's agency costs concept, etc.

Unlike investigations which trace influence of cultural beliefs and values on the institutional environment and institutional arrangements, this paper tries to reconstruct cultural beliefs and mental models by means of institutions operating at the time. The first part of the paper deals with the mental model concept, analyses literature on Russian mentality and on one of its features such as collectivism and *artel*nost. The second part describes *artel* as a form of economic activity in Russia. It lists types of *artels* and they are interpreted both as formal and informal institutions. The third part reveals Russian *artel*nost as a research artefact. The fourth part gives evidence that *artel* can be interpreted as a way of solving team production problems: adverse selection and opportunistic behavior. In the fifth part the author sums up the results of the investigation and makes conclusions.

### **Mental models and cultural beliefs**

Many researchers have emphasized a decisive influence of informal institutions on economic behaviour and its development. One can name among them M. Weber who wrote about the influence of religion, T. Weber and J. Commons, representatives of the old American institutionalism, modern traditional institutionalists as well as members of the French historical School «*Annales*» who studied mentality. New Institutional Economics scientists treat informal institutions, as a rule, as a given reality. That's why they do not consider them to be the subject of investigation. However, they state that a social organization and an institutional pattern reflect mental models and cultural beliefs.

D. North uses the notion of mental models while formulating his ideology concept. He writes that «ideologies are shared frameworks of mental models possessed by groups of individuals that provide both an interpretation of the environment and a prescription as to how that environment should be ordered» [North, 1994, p. 363, n. 6]. Denzau and North in their paper of 1994 state that in order to understand decision-making processes in conditions of great uncertainty it is necessary to find out connection between mental models created by people to comprehend the surrounding world, ideologies brought about by these models and institutions set up in the society to regulate interpersonal relationships.

The notion of cultural beliefs was introduced into the scientific vocabulary by A. Greif. He regards them as common ideas shared by individuals belonging to a certain group and interacting within the group and beyond it. These cultural beliefs provide focus points and coordinating ex-

pectations. They represent non-technological rules of the game which can change endogenously. The existence of institutions of a certain type and the emergence of new ones demonstrate the growth of knowledge which can result from deliberate projections as well as unpremeditated experiments [Greif, 1994, p. 915]. According to Greif some rules of the game could be caused by the existing technologies and, consequently, institutions must be regarded as non-technological restrictions which structured recurring interactions between people.

Mentality as a complex of intellectual habits, beliefs, mental aims typical for some community or a group of people, and the state of mind, or a complex of behavior, mentality or judgemental patterns, ethical norms, the turn of mind represents propensity for acting in a particular way.

This study stresses the idea that in all approaches to interpret mental models and mentality, the latter becomes apparent in motivation, actions, economic and communication methods.

*Collectivism as the Russian mentality feature.* Modern science cannot give a trustworthy prototype of the Russian person. In theoretical works the Russian person is quite inconsistent and even contradictory. On the one hand, he is unattractive because he tends to be a Utopist, disrespects private property and works hard only occasionally. On the other hand, he is notable for his spiritual life, aspiration for freedom and independence, he regards work as the highest value, strives for justice and equality with the aim of serving people and the state. Collectivism is often named by researchers as a typical feature of the Russian national character and mentality. They regard it as an informal, embedded institution of the Russian society. These statements go back to the middle of the XIX century when expectations of achieving rapid results after the Great Reforms were replaced by disappointment and, as a consequence of this a new trend in social mentality which linked Russia's future with a specific national way of development, was born. It projected a distinctive non-capitalistic way of development based on a collectivist principle. Implementation of this principle was to be carried out by maintaining and consolidating socio-economic forms which, according to researchers, were organically inherent in Russia, i.e. communes, cooperatives and artels. V. Vorontsov, a Russian narodnik, specified that «our capitalistic manufacturing must be transformed into a state or artel production», «our further industrial progress will rest on truly people's principles represented by communes and artels» ([V. V., 1882, p. 68, 309]. See also: [V. V., 1895a, 1895b]).

Western scientists also actively study problems related to the Russian mentality (See [The World of the Russian Peasant..., 1990; Kingston-Mann E. and Mixter T., 1991; Zviglyanich, 1993; The Russian Mentality..., 1995]). It is almost commonly recognized that commitment to collective work typical for the Russian culture makes it completely different from Western cultures.

O. Figes and G. Hoskins emphasize Russian people's innate propensity for collective work [Hosking, 1991; Figes, 1996]. It is regarded as a particularly important feature of the Russian mentality which greatly influences management styles and practice in Russia [Lawrence, Vlachoutsicos, 1990, p. 20]. D. Bollinger also insists on the collectivist nature of the Russian management culture [Bollinger, 1994]. F. Trompenaars has come to different conclusions. According to public opinion polls, the level of individualism among Russian managers as well as other employees is extremely high [Trompenaars, 1993].

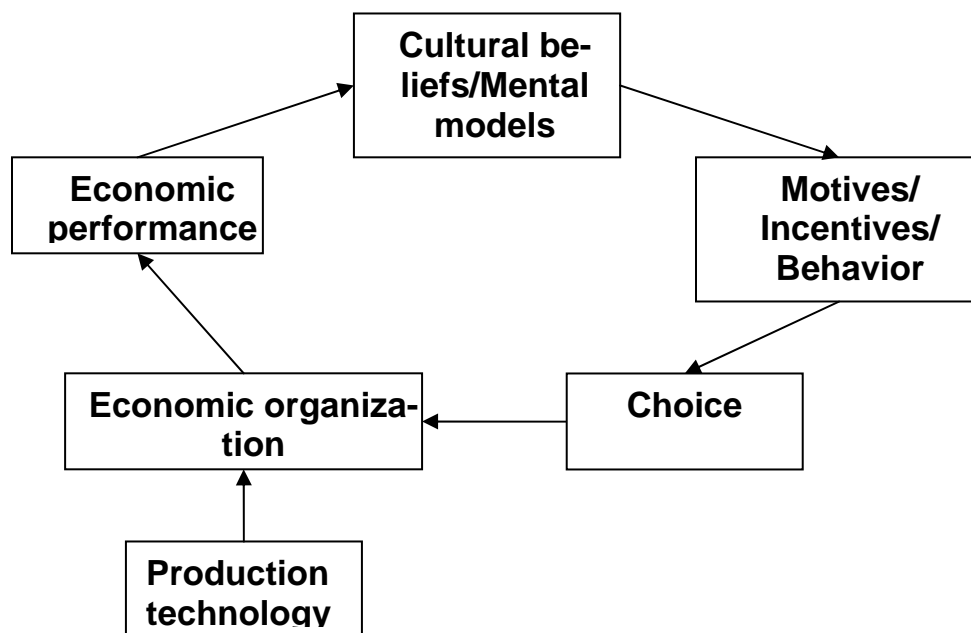
According to G. Hofstede's estimations, Russian people's values are only 50% collectivist, whereas the statistical data of a Russian scientist who uses Hofstede's methods show the dominance of collectivist values [Naumov, 1996]. In the mid 1990s a survey of 53 countries including Russia was conducted within the Globe Project framework. According to the level of collective value development, Russia ranked 35, and the polled managers wished it were higher [Grachev, 1999, p. 30].

As it has been emphasized, modern Russian scientists regard Russia's traditional version of collective work as *artelnost* [Yasin, 2003, p. 18], which is most clearly formulated by V. Ryazanov who names «a specific propensity for collective work in the economic sphere», which becomes apparent in communes and artels among principal sources of Russia's economic system [Ryazanov, 1998, p. 330]. He explains wide spreading of *artel* forms by their maximum suitability to the specifics of the country's economic development and by conformity with behavior patterns of the population majority [Ryazanov, 1998, p. 344]. That's why the problem of finding out to what extent collective work has affected and still affects Russian people's behavior is very pressing.

*Operationalisation of the artelnost notion.* Cultural parameters such as individualism or collectivism are quite difficult to formalize, measure and express in quantitative terms. Modern assessments of collective work are carried out by means of field research on the basis of public opinion polls. When we try to assess the past, this approach is impossible. That's why

historical assessments are made, as a rule, when analyzing statements, literary works, etc.

In order to make the artel<sup>nost</sup> notion operational a new institutional economics tool will be used in this paper. In accordance with the theory of institutions and institutional transformations [Greif, 1994; 1998; Denzau, North, 1994] present institutions reflect actors' cultural beliefs or mental models because they form the motivation and incentive basis to set up certain institutions and, to a large extent, predetermine the formation of appropriate institutions (Figure). Acceptance or rejection of particular institutional types depends on the prevalence of this or that cultural belief.



*Fig.* Mental models and organizational economic forms

Consequently, if artel<sup>nost</sup> had really been a traditional Russian version of collective work, it would have led to the creation of appropriate institutions at all levels of the hierarchy introduced by O. Williamson [Williamson, 2000, p. 596–599]. In informal, embedded institutions it should have become apparent as appropriate customs, traditions and norms, while at other levels it should have led to a continual spontaneous development of appropriate, stable and widely spread labor and economic forms, as well as formed the basis of successful institutional engineering, i.e. implementa-



tion of projected artel labor and economic forms in accordance with these traditions by means of different measures including legislative ones.

Proceeding from the above-stated assumption, the following criteria, in our opinion, can be used to measure artelnost: firstly, the extent to which artel labor and economic forms spread in all spheres of activity; secondly, for the most part spontaneous character of their emergence; and finally, inherent commitment to this organizational economic form, i.e. lack of opportunistic behavior in artels.

### **Artel as economic organization**

There were a lot of artel types carrying out different work in Russia:

- of a spiritual character: religious, entertaining, educational (joint subscriptions to newspapers and books, hire of teachers, etc.)
- nursing
- communal
- of thieves
- of beggars
- economic: agricultural, fishing, production, handicraft, trading, building, etc.

A special role was played by exchange artels in the XIX century. Their members' duties were diverse. They provided loading and unloading of goods at the exchange, packed and dispatched various cargoes, guarded warehouses, etc. Besides that, artel members fulfilled other duties for their employers: they worked in offices as assistants and errand boys. Sometimes they were given big sums of money to carry because their employers trusted them. Quite often they did household chores. As exchange artel members were paid by the day and by the piece, this organization could not be, in fact, considered as artel, which was officially recognized by the 1823 Statute [O vzyskanii 40-rublyovoy poshliny..., 1823]. The main focus are artels which employed collective work because it is the subject of this study. They include labor artels proper (a group of workers offering their collective services as builders, diggers, loaders, porters, etc. for pay) and production artels of a pure labor type where all workers are owners of the plant and the goods they produce, there are no hired workers, the head is elected by the workers and can be replaced at any time [Tugan-Baranovsky, 1989, p. 192].

*Artel as a formal and informal institution.* The word 'artel' was used in legislative documents for the first time in the middle of the XVII century

replacing the word 'vataga'(crowd). It was formalized as an institutional economic form in 1799 in Guilds' Charter where in Chapter XIV 'On work done by artels' artel members' rights and duties were finally defined. According to the definition formulated in Clause 1, «work or a task which is beyond one worker's capabilities can be done by common consent by a group of workers, and such groups must be called artels» [Ustav tsekhov, 1799]. Clause 4 also had some important information on artels. It read that «each artel member must be responsible for the incurred damage or losses and guarantee payment».

The artel definition was specified in the 1823 Statute which ran that «artel means that each worker is responsible for everybody in artel and the whole artel is responsible for each worker, they are paid from a common fund (duvan) and work is done collectively» [O vzyiskanii 40-rublyovoy poshliny..., 1823, art. 4]. The same definitions were used in the Trade Charter, and in the XIX-early XX centuries artels were specified as «associations of workers set up voluntarily to carry out work or production which is beyond one worker's capabilities» [Ustav torgoviy, 1857, Art. 79].

Labor artel Statute was passed on June 1, 1902 in which labor artels were defined as «partnerships set up to carry out specific work or production as well as provide services by participants' personal involvement at their expense by collective guarantee». A similar definition was given in the Civil Statute [Zakony grazhdanskiye, 1906, Art. 2198<sup>1</sup>].

Labor artels were established in accordance with either existing statutes or agreements. Their charters were submitted to the governor for approval and published in local newspapers. Any person, male or female, over 17 years old could become an artel member. But under-21s had no right to participate in management. Artel got an official status if it had 5 members and its charter did not stipulate a greater number of workers. It was managed by the general meeting. Meetings took place only if not less than half of the members were present. Every member had one vote. Decisions were made by a majority of votes. More important decisions required the presence of 2/3 of its members. Membership fees were the same for everybody and could be paid in cash or by things. If sums paid to the cashier exceeded fees, they were considered as loans. Wages were paid to all members in accordance with the resolution of the general meeting regardless of the sums in each member's account. Artel used its assets to cover all losses and meet liabilities. If artel's assets were insufficient, its members'

private property was claimed in its entirety or in the amount specified in the Charter.

Regulations on exchange artels were passed on June 16, 1905. They were similar to the Labor Artel Statute. In accordance with Clause 1, «exchange artels aim at carrying out work related to acceptance, dispatch and storage of goods as well as fulfilling office tasks and trading with organizations and individuals» [O pravilakh dlya birzhevykh arteley..., 1905]. Exchange artels could function only in accordance with the charter which was approved by the Exchange Committees. Thus, exchange artels' activities were based on clearly defined rules, meeting of liabilities being guaranteed collectively by the insurance policy.

All chartered artels enjoyed the rights of entities, i.e. they could buy assets, sign agreements, sue and be sued, set up or take on lease industrial or trade facilities. Thus, the most important features of artels in Russia were as follows:

- voluntary membership;
- personal involvement in artel's activities binding for all members;
- collective guarantee, i.e. all members shared responsibility for the damage and losses.

Besides that, amendments to the 1823 Guilds Charter stated that anyone wishing to be an artel member must pay an admittance fee. These formal principles of managing artel's activities supported by the legislation, strengthened the rules used by artels at the time and which were full of generalities. The only thing regularly highlighted by various state decrees on objects of management was the necessity of each member to carry responsibility for artel.

As far as artels' structure, relationships among members, their contracts and agreements are concerned, there was hardly any legislation on that, and artels' charters differed significantly from each other. That's why formal principles were supplemented with informal, widely spread procedures spontaneously formed over artels' long history. These principles include taking decisions by a vote at the general meeting, electing management, equality in profit sharing for the same labor input. Admittance criteria were also similar. The following things were taken into consideration:

- gender;
- place of residence;
- age;
- physical strength;

- skills;
- property status;
- no other jobs;
- moral qualities (sobriety was valued most highly).

These criteria were to provide artel members with work on equal terms in return for their commitment to work in artel's interests. Honest work was also guaranteed by:

- admittance fee;
- references (until the admittance fee is fully paid);
- tests;
- trial period;
- penalties;
- risk of expulsion from artel;
- collective guarantee.

### **Russian artelnost as an artefact of investigation**

Here's a question to consider. Did the Russian person really have some innate propensity for collective work and give priority to public goals over his own? Modern statements about Russian artelnost based on the conclusions of the past seem to be mainly rhetorical. Proverbs and sayings are very good examples of both people's beliefs and mentality. Proverbs and sayings collected by V. Dal do not make it possible to give a simple answer to the question whether the Russian person was a collectivist. On the one hand, we find out that the «surrounding world» (commune, artel), as seen by the people, is an omnipotent independent subject. On the other hand, it is sometimes described in negative words.

A lot of modern scientists insist that artels as economic forms were common in Russia, B. Mirinov being one of them. He writes that «besides communes in rural and suburban areas, they [peasants] developed a kindred organizational form, artel, which we see in every place where people are involved in specific activities beyond peasants' and settlement communes» [Mironov, 2003, V. 1, p. 525–526].

But a thorough study of facts makes it possible to conclude that collective labor forms, including artels, were not so common as they are sometimes described. Deliberate introduction of labor artels required much time, effort and investments from those who tried to do it.

Despite the fact that at the beginning of the XX century Russia witnessed a significant growth in the number of cooperatives (there were 1625 cooperatives in 1901–1902, by January 1, 1917 their number had amounted to 47 187 uniting 14 mln households or 84 mln people), M. Tugan-Baranovsky thinks that «these figures shouldn't exaggerate the role of Russian cooperatives». The fundamental difference of the Russian cooperative from West-European is that the latter «came into being without any assistance from the state. It was not the state which created cooperatives in the West, although it supported the cooperative movement. Our cooperatives which were mainly based on loans were entirely propagated by the state, and very few of them were true cooperatives in their content» [Tugan-Baranovsky, 1989, p. 297].

Two artel types were common and successful in Russia, i.e. butter manufacturing and exchange ones. These artel types are often referred to when proving that artelnost is inherent in the Russian national character. Let's consider each type in detail.

There were 51 butter manufacturing artels in Russia in 1901, in 1917 their number was 3000. They were not of a labor type though, because hired workers were engaged in butter manufacturing. Small milk producers owned these artels, managed the manufacturing process personally and collaborated with other owners only when selling milk. Consequently, a butter manufacturing artel is a selling cooperative, a processing partnership. The butter belonged not to the producers but to the milk suppliers. Profits were divided in proportion to the supplied milk, not by shares [Tugan-Baranovsky, 1989, p. 102]. Such artels emerged in Russia in late 1860s. They were initiated by N. Vereshchagin, a gentleman by birth, who borrowed the idea from Switzerland and had been introducing it actively in Russia since 1865 [See a series of articles: Vereshchagin, 1999]. The first artels didn't live long. One of the reasons of their failure was that peasants were not prepared for them. They gave no credence to this economic form. Their attitude to innovations was that of opposition. That's why Vereshchagin made every effort to convince them of advantages of dairying artels. Butter and cheese manufacturing artels started springing up again only in late 1890s and became common only when peasants came to understand that it was a paying business, and it had advantages over other forms, including capitalistic. It has already been mentioned that exchange artels were not artels in their true sense.

As far as labor artels which used collective work are concerned, they became common only in the spheres of activity which didn't require big

investments, complicated machinery, where work was homogeneous and could be divided into equal parts and done by individual workers, in other words, where people simply cooperated to do a job. Artels were mainly formed to produce goods in the absence of expensive machinery and great technical expertise [Yarotsky, 1898, p. 22]. N. Kalachev described artel as part of the common people's life and relationships [Kalachev, 1999, p. 308].

Production artels of a pure labor type were very rare. Great Britain had only one artel of this type in 1916, whereas Germany had none. There were about a hundred small artels in France due to the support from the government bodies, public institutions or individuals. Only big Italian agricultural artels achieved success without any support. But their aim was to fight unemployment, and their members had more than one job. In Russia, labor artels didn't become common either. According to I. Sapozhnikov, there were only 16 artels in Moscow in 1908, 60 in 1909, and about 115 by 1916. However, none of them developed into a big enterprise. They were small workshops which either died or turned into small capitalist enterprises [Sapozhnikov, 1916, p. 14]. Sapozhnikov thinks that shortage of working capital and mainly absence of organizational, technical and institutional support caused the failure of those artels.

As far as agricultural artels are concerned, of all types of cooperation peasants could form, these were the rarest. As it is written in one of the early XX century articles on agricultural artels, «at present we have not more than a few dozens of big agricultural artels in Russia which would buy or rent land collectively with a view to working jointly on it» [Gorovaya, 1916, p. 8–9]. This phenomenon was caused, according to Gorovaya, by two things. Firstly, artel members often had to give up habits and propensities acquired in childhood and inherited from the previous generations. They had to conform to the actions and desires of their fellow-workers, but neither household possession nor the compulsive order in the commune taught peasants to be compliant. «Sometimes they champion their interests passionately but at other times they submit to the decision made by the majority of artel members out of necessity» [Gorovaya, 1916, p. 6]. Secondly, differences in peasants' property status, capacity for work and intellectual faculties hampered artels' activities.

Agricultural artels' existence, like that of butter manufacturing ones, was mainly due to enthusiasts' activities. It was Nikolai Levitsky who organized the first agricultural artel in Russia in 1896 and who was called 'artel's batko' (ideological leader) by peasants. On the other hand he

pointed out that labor artels in general and production artels in particular were the most difficult types of cooperation to put into practice. «It is not an easy task. It requires that peasants have plenty of stamina, developed self-consciousness and great initiative» [Levitsky, 1916, p. 4]. He pointed out that the society rejected this form of production organization, that «artels were the most neglected form of cooperation» unlike consumer, credit or loan-saving societies which were under the patronage of the community, zemstvo or state.

Only one big production artel lived long in Russia and proved to be viable. It was a knife-producing artel in the village of Pavlovo which was set up in 1893 and supported by individuals, public institutions and the state. However, Pavlovo artel gave so few benefits to its members that hired workers did not want to join it [Tugan-Baranovsky, 1989, p. 207].

These facts prove once again that Russian people did not have any special propensity for working in artels as a way to meet their needs to work communally, and that the main reason for joining them was of economic nature. Collective work was only a means which enabled people to make money in initial conditions and types of jobs.

In practice, production artels operating both abroad and in Russia were either ineffective or turned into capitalist enterprises, which is demonstrated quite convincingly in one of the articles of the late XIX century [P-r, 1897]. Many researchers pointed out that a lot of artels which originally were workers' unions turned into entrepreneurs' unions. Hands were hired to do work, whereas artel members managed them and gained profits. Thus, the very essence of artel as a workers' union was destroyed. In this connection, wage labor in artels was restricted by law. Artels' charters had to stipulate terms and the procedure of employment as well as the number of hired workers. Hired workers were allowed to work in artels only on a temporary basis in exceptional cases.

*Opportunistic behavior in artels.* Opportunistic behavior, according to the definition given by O. Williamson, implies pursuing one's own goals, sometimes perfidiously and unethically, which interfere with an institution's interests [Williamson, 1996, p. 689]. Postcontracting opportunism becomes apparent in the form of shirking, extorting and blackmailing. Consequently, opportunistic behavior can testify to disregard of collective interests. Discipline (labor, technological, economic, etc.) is crucial in cooperation. Was there any discipline in artels? Unfortunately, it is impossible to estimate the actual scale of opportunistic behavior in artels.

For example, there were no special penal books in exchange artels to protect artel's reputation. When the year was over, and all payments made, artel's financial books were destroyed making it impossible to see whether any member had been fined or not [Kalachev, 1999, p. 322]. However, the destruction of the books in itself testifies to the problem of improper attitude to work. Embezzlement was the main problem in artels' activities. Newspapers of the early XX century were full of embezzlement facts, misappropriated sums amounting to 200,000 roubles, which was a huge amount at the time. That's why one of the reports made at the first all-Russia convention of exchange artel representatives was on reinforcement of responsibility for embezzlement [Vserossiysky s'ezd predstaviteley ..., 1912].

Opportunistic behavior was common practice in artels. In his paper on artel development in Russia, G. Petrov points out that attempts to make artels common failed. They failed to overcome negative features inherent in other forms of cooperation. Minutes of general meetings mentioned quarrels, envy and favoritism, lack of self-consciousness and self-discipline, and poor attendance at meetings. Because of that, management had to either impose penalties or pay for attending meetings. Not all artel members worked for it. Plenty of them used artel's raw materials for work somewhere else, sometimes for artel's competitors [Petrov, 1917, p. 66–67].

In butter-manufacturing artels members spoilt milk by adding water, some other substances, by not keeping within technological processes. Even such an adept artel's advocate as M. Slobozhanin stated that artels' reality was a far cry from their ideals. These ideals embodied «people's aspirations for a better financial standing, freedom, equality, democracy, consciousness, dignity, friendship, fraternity, etc.» [Slobozhanin, 1919, p. 14].

To sum up, we would like to quote M. Tugan-Baranovsky who said that despite all profuse talk about Russian people's unusual propensity for working collectively, enthusiasm for associations and artels had no roots in Russia, and that's why it brought no fruitful results. General praising of artels did not result in creating a single, stable artel and did not lead to the emergence of a cooperative movement somewhat similar to that in Europe. The individualistic West with its different political systems turned out to be more tailored to accept artel principles than communal Russia [Tugan-Baranovsky, 1997, p. 495–496; 498–499]. Nevertheless, the question why labor artels were common in Russia, is still open. Labor artels, as an institutional form, seem to have been a good way of solving a classical teamwork problems and enabled to considerably cut agency costs.



## **Labor artels as team production**

Work in artels can be considered as teamwork. A team is a group of individuals with common aims who divide work among themselves and carry responsibility for achieving certain results. Team members are inter-dependent because to achieve common aims they need the results of the work done by their fellow-workers. The team's main difference from traditional formal work groups is synergy effect (i.e. total amount of work done by the team exceeds the sum of their individual work). Teamwork is widely used at present. Teams are formed when it is economically beneficial, regardless of which culture, collective or individualist, prevails in the society.

Using D. McIntoch-Fletcher's team criteria we can classify artel as an intact team type in contrast to a cross-functional one. An intact team is usually a production unit or a long-standing group of workers producing a certain product or service. It can have a leader who is not a team member, and whose duty is to coordinate work and secure order. In other cases the team can have a leader from within. In some cases team members can play the leading role in turn. D. McIntoch-Fletcher points out that quite developed mature autonomous intact teams can operate as small enterprises [McIntoch-Fletcher, 1996].

There are four team types according to their aims:

- consultative (dealing with management)
- production (teams of production workers, miners, repairmen, etc.)
- project (research and planning groups, etc.)
- action (sport teams, for example).

From this point of view, artel can be defined as a production team.

The problem of teamwork production and methods of monitoring it was analyzed in a well-known article by A. A. Alchian and H. Demsetz [Alchian and Demsetz, 1972]. Teamwork entails big transaction costs: organizational, of monitoring, disciplining, assessing each member's contribution to the production output. «Team production will be relied upon... if there is a net increase in productivity available by team production, net of the meteriong cost associated with disciplining the team» [Alchian and Demsetz, 1972, p. 780].

Alchian–Demsetz' study was a starting point for a number of articles, including an article by M. C. Jensen and W. H. Meckling [Jensen and Meckling, 1976, p. 308] in which they introduce the notion of agency costs. According to them, in most agency relationships the principal and

the agent incur positive costs of monitoring as well as bonding costs in a monetary or non-monetary form.

Besides, there are the principal's residual losses as a result of discrepancies between the agent's solutions and the solutions that could have maximized the principal's financial standing [Jensen and Meckling, 1976, p. 308].

In his paper 'Teamwork and moral hazard', B. Holmstrom demonstrated that the free rider problem could be solved to a great extent if ownership had been at least partially separated from the workers, which gives priority to capitalist firms over partnerships. Labor contribution rating system can help to overcome a moral hazard threat because it divides risks in a more favorable way.

Of great importance are the following questions:

- whether the agents can come to a mutual agreement while using this work assessment method;
- what monitoring methods are used;
- how the output is divided among team members, including the subject of monitoring, in order to work out the most effective incentives for work [Holmstrom, 1982, p. 338–339].

The structure of principal–agent relationships in artels was quite complicated. On the one hand, the owner who hired artel workers to do a job, played the role of the principal while artel was an aggregate agent. At the same time the owner often signed agreements with individual artel members when, for example, he hired them himself, as it was in barge hauling artels, or if he employed them to do some household chores, which was common practice in exchange artels. On the other hand, artel itself served as the principal towards artel members, but at the same time they jointly controlled artel activities because important decisions were made at the general meeting.

Labor artels had quite successful mechanisms of lowering different transaction costs resulting from team production:

- by calculating (or measuring) productivity and remuneration;
- by preventing possible opportunism;
- by solving a free rider problem when one member's shirking affects the rest of the team.

*Prevention of opportunist behavior in artels.* Admittance criteria, such as a property status, moral qualities of a member-to-be and an admittance fee which was, as a rule, quite high, were preventive measures against op-

portunist behavior before signing a contract with the worker — screening mechanisms. For example, admittance depended on «paying, on average, up to 1,000 silver roubles [Kalachev, 1999, p. 320, 324]. Thus, to become a member of Metelkin artel at St. Petersburg's Marine Exchange, a candidate had to pay a fee of 900 roubles to artel in 1812, 200 roubles paid at the time of joining it [Kalachev, 1999, p. 350]. In Moscow in the middle of XIX century amounted to 1,000–1,300 silver roubles [Kalachev, 1999, p. 324]. At that time it was a huge amount of money which could be earned only by a hard working person with entrepreneurial skills. The fact of having this sum signalled that the candidate had all the necessary qualities. The problem of dealing with false information about candidates was partially solved by finding out the truth in the neighborhood where they lived because they had to give information on the place of residence. References also played an important role. Thus, candidates were, to some extent, screened because of admittance criteria. Besides being a signal, the admittance fee, according to Jensen–Meckling's terminology, played the role of bonding costs, as the member who was about to be expelled from artel because of his inadequate behavior, lost a part or the whole sum of the collateral.

Collective guarantee was a powerful factor which undoubtedly made postcontractual opportunist behavior less probable.\* But it could not prevent it completely. That's why artel members were paid accordingly: they could be punished for their demerits in accordance with artel rules or resolutions passed at the general meeting. The inflicted punishments included fines, corporal punishment, removal from work and even expulsion. The list of demerits and the size of fines varied in different artels. For example, in Metelkin artel which was mentioned above, a member had to pay a 5-rouble fine for being absent from work, for abusing other members, for not being as hard working as them, or being drunk at work. If a member

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\* Grameen bank set up in Bangladesh by a 2006 Noble Prize winner, Muhhamad Unus, is a good modern example of giving out loans, taking into account collective guarantee as a tool to solve the problem of adverse selection and prevent agents' opportunism. The bank specializes in giving small loans. Their principles are: no collateral; consecutive crediting; loans to women (6 mln women have taken loans from this bank). At the early stages the bank used to give loans only to groups of people using their collective guarantee to return the money to the bank. By doing that, they solved the problem of asymmetric information between the lender and the borrowers, and could expect loans to be taken only for feasible projects. It was understood that one borrower's default would make the other borrowers' loans impossible.

had an additional job without having let artel know about it, he had to pay 25 roubles [Kalachev, 1999, p. 350]. One of artels in 1810 had a rule of imposing a big fine on a member causing trouble between the employer (or 'master' as members of artel called him) and the members [Kalachev, 1999, p. 349]. Some artel charters ordered its members to inform on their fellow-workers if they misbehaved. If they did not do that, they were also severely punished. Such practice seemed to be common because this type of mutual monitoring considerably lowered costs related to it.

One of the ways of fighting shirking suggested by Alchian and Demsetz involves selecting of a special subject who monitors the team's performance. However, the problem is that the subject can shirk himself. There was a controller in each artel (starosta (headman), desyatnik (charge-hand), ataman) who besides getting his share of pay, as a rule, was paid some extra money as a bonus for his work, but was fined if he misbehaved.

Thus, exchange artels were run by persons, either selected from within who did it in turn, or elected at the general meeting. The "manager", starosta, was usually elected for a one-year period. If he coped with his duties well, he could be re-elected for a new term. His duties included securing artel's money, assigning tasks to members, checking their completion, imposing petty fines. The elected starosta was specially remunerated for his work whereas the person who played this role in turn, did not get any extra pay for that.

Fishing and hunting artels always had a head who was paid 4 to 7 times more than an ordinary member. Barge hauling artels paid equally to all members including the elected desyatnik for their work but he was paid a special remuneration for additional duties.

Thus, artel can be defined as a coalition of agents with a revolving leadership structure where agents participated in profit making as well as took turns in playing the role of the principal. Rotation of agents in the principal position with the authority delegated to them to control the other members' actions resulted in exchanging reliable information, creating the necessary prerequisites for strengthening trustworthy relationships among agents and developing cooperation, which in turn led to creating an «associative atmosphere» within the organization which prevented opportunist behavior and maximized feasibility [Williamson, 1975, p. 38, 44]. Personal or collective contracts with an employer served as an additional protection from opportunism in artels, e.g. there were detailed laws regulating relationships among barge haulers and ship owners. Thus, conflicts could be

settled both unofficially and in court, shipping and arbitrary courts being in charge of that.

*Measurement cost cuts in artels.* Payment for work done by artel members was made in accordance with the capital or effort contributed by each of them. Profits were usually divided equally among the members, fines being deducted after that. Sometimes the amount of labor input, on rarer occasions the level of expertise, were taken into account to calculate workers' pay. Measuring of individual input entailed transaction costs. Cutting of these costs was mainly achieved by setting up artels to carry out simple one-type jobs. Work could be either divided into quantitatively equal parts and assigned to separate workers, as it was done for loading and unloading, digging, mowing, forest cutting jobs, or it simply required joint effort, as in barge hauling.

Another important thing was that labor, as a production factor, was relatively homogeneous because physical strength and skills were taken into account when hiring artel members. This team formation principle was common everywhere. According to A. Engelgardt, «peasants do not agree to mow collectively by forming a line. It is possible only when artel is formed by 4–5 workers with similar capabilities» [Engelgardt, 1995, p. 146].

*Effectiveness problems in artels.* Researchers of XIX — early XX centuries highlighted some reasons why production artels did not succeed:

- lack of discipline among artel members;
- the employer's absence and the elected leader's weak authority with the result that his decisions are ignored, with workers putting their interests first;
- the leader selected from within, as a rule, does not have enough expertise and management skills;
- workers' technical backwardness, weak propensity for innovations and implementation of modern technology; workers do not tend to use new production methods;
- no freedom in selecting staff. Staff consists only of artel members. A new member represents a threat to the benefits which artel has due to its old members' effort. That's why, if artel is successful, introduction of new members leads to old members' losing part of their benefits [Tugan-Baranovsky, 1989, p. 196].

E. Fama and M. Jensen put forward a question of how to divide among agents such functions as: 1. decision management (decision initiation and

implementation); 2. decision control (decision ratification and monitoring)  
3. carrying a residual risk in order to be economically effective.

According to them, it is reasonable to make one or several agents in a simple organization responsible for these functions because if the number of candidates for the retained profits is great, their participation in decision control entails considerable costs. The above-mentioned functions were not separated in artels. Because of collective guarantee, all members carried risk equally, i.e. were responsible for the damage and losses. They, in fact, signed a share contract which stipulated equal rights for retained profits and made collective decisions at general meetings. The functions of carrying risk and making decisions lowered the profits, but they were compensated by cutting measurement costs and less opportunism.

### **Concluding remarks**

The following conclusions can be drawn:

1. Specific features of the Russian national character and culture did not cause the emergence of artel as an institutional economic and labor form.
2. Manufacturing artels in Russia were not common. They did not live long. A lot of XIX — early XX century researchers considered long-term cooperation of producers and artels completely unpractical in Russia. Even those who believed in their future stressed the necessity of coercing people who worked by themselves into these economic organizations. It was also important that the government, zemstva, and individual sponsors should support them. The researchers involuntarily pointed out that they were of contradictory character.
3. Labor artels were mainly confined within activities of low capital investment and uncomplicated machinery. Work was homogeneous and the job could be divided into quantitatively equal parts.
4. Practically, the only asset used to carry out simple homogeneous work was workers' human capital, which could lead to extra opportunist behavior. That's why artel as a contract-based institutional type came into being to control it.
5. In the framework of New Institutional Economics, artel as an economic organization can be interpreted as a way of solving team production problems. The behavior of artels' members was rational and quite individualistic.

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